

## Reinforced Polymer Electrolyte Membrane

### Abstract

A method is provided for making a reinforced polymer electrolyte membrane, such as may be used in electrolytic cells such as fuel cells, by mixing a sulfonate- or sulfonyl halide-functional polymer with a bisamidine compound and subsequently trimerizing the amidine groups of the bisamidine compound to form triazine linkages. The sulfonyl halide or sulfonate groups may then be converted to sulfonic acid groups, yielding a polymer electrolyte reinforced with a polytriazine.

10